

AMENDMENT TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS:

Claims 1 to 16. (Canceled).

17. (Currently Amended) A fuel-cell system, comprising:
a reformer unit configured to produce hydrogen from a raw material;
a fuel-cell unit disposed downstream of the reformer unit and operable in accordance with the hydrogen produced by the reformer unit;
an oxidation device configured to convert carbon monoxide into carbon dioxide and disposed between the reformer unit and the fuel-cell unit; and
a water-injection device disposed at the oxidation device and configured to inject water into the oxidation device ~~to supply oxygen to the oxidation device to convert carbon monoxide into carbon dioxide;~~
wherein the oxidation device is configured to convert carbon monoxide into carbon dioxide by a reaction of carbon monoxide with oxygen supplied by the water injected by the water-injection device; and
wherein, based on the oxygen supplied by the water injected by the water-injection device, a reduced amount of a supplemental oxygen containing substance is supplied to the oxidation device.

18. (Currently Amended) A fuel-cell system comprising:
a reformer unit configured to produce hydrogen from a raw material;
a fuel-cell unit disposed downstream of the reformer unit and operable in accordance with the hydrogen produced by the reformer unit;
an oxidation device configured to convert carbon monoxide into carbon dioxide and disposed between the reformer unit and the fuel-cell unit; and
a water-injection device disposed at the oxidation device and configured to inject water into the oxidation device ~~to supply oxygen to the oxidation device to convert carbon monoxide into carbon dioxide;~~

wherein the oxidation device is configured to convert carbon monoxide into carbon dioxide by a reaction of carbon monoxide with oxygen supplied by the water injected by the water-injection device;

wherein, based on the oxygen supplied by the water injected by the water-injection device, a reduced amount of a supplemental oxygen containing substance is supplied to the oxidation device; and

wherein the fuel-cell system includes a drive system of a motor vehicle.

19. (Previously Presented) The fuel-cell system according to claim 17, wherein the raw material includes a liquid raw material.

20. (Currently Amended) A fuel-cell system comprising:
a reformer unit configured to produce hydrogen from a raw material;
a fuel-cell unit disposed downstream of the reformer unit and operable in accordance with the hydrogen produced by the reformer unit;
an oxidation device configured to convert carbon monoxide into carbon dioxide and disposed between the reformer unit and the fuel-cell unit; and
a water-injection device disposed at the oxidation device and configured to inject water into the oxidation device ~~to supply oxygen to the oxidation device to convert carbon monoxide into carbon dioxide;~~

wherein the oxidation device is configured to convert carbon monoxide into carbon dioxide by a reaction of carbon monoxide with oxygen supplied by the water injected by the water-injection device;

wherein, based on the oxygen supplied by the water injected by the water-injection device, a reduced amount of a supplemental oxygen containing substance is supplied to the oxidation device; and

wherein the reformer unit includes a mixer configured to mix the raw material and an oxygen-containing substance.

21. (Previously Presented) The fuel-cell system according to claim 20, wherein the oxygen-containing substance includes at least one of water and air.

22. (Previously Presented) The fuel-cell system according to claim 17, further comprising a two-stage compressor configured to supply compressed air to at least

one of a process gas between the oxidation device and the fuel-cell unit and a cathode of the fuel-cell unit.

23. (Previously Presented) The fuel-cell system according to claim 17, further comprising a water separation device disposed in at least one of an exhaust-gas stream from a cathode of the fuel-cell unit, an exhaust-gas stream from an anode of the fuel-cell unit and a cleaned-gas stream from the oxidation unit, the water separating device being configured to separate the water contained in the corresponding gas and to supply the water to a water-storage device disposed upstream from the reformer unit.

24. (Previously Presented) The fuel-cell system according to claim 23, wherein the water separation device includes a condenser.

25. (Previously Presented) The fuel-cell system according to claim 23, further comprising a water circulation loop configured to cool at least one of the water separation device, the fuel-cell unit, air supplied to a cathode of the fuel-cell unit and air supplied to the reformer unit.

26. (Currently Amended) A fuel-cell system comprising:
a reformer unit configured to produce hydrogen from a raw material;
a fuel-cell unit disposed downstream of the reformer unit and operable in accordance with the hydrogen produced by the reformer unit;
an oxidation device configured to convert carbon monoxide into carbon dioxide and disposed between the reformer unit and the fuel-cell unit;
a water-injection device disposed at the oxidation device and configured to inject water into the oxidation device ~~to supply oxygen to the oxidation device to convert carbon monoxide into carbon dioxide;~~ and
a catalytic burner configured to combust exhaust gas from an anode of the fuel-cell unit and to direct corresponding waste heat through a heat exchanger to the reformer unit;
wherein the oxidation device is configured to convert carbon monoxide into carbon dioxide by a reaction of carbon monoxide with oxygen supplied by the water injected by the water-injection device, and

wherein, based on the oxygen supplied by the water injected by the water-injection device, a reduced amount of a supplemental oxygen containing substance is supplied to the oxidation device.

27. (Previously Presented) The fuel-cell system according to claim 26, wherein the catalytic burner is connected to a supply tank supplying the raw material.

28. (Currently Amended) A fuel-cell system comprising:
a reformer unit configured to produce hydrogen from a raw material;
a fuel-cell unit disposed downstream of the reformer unit and operable in accordance with the hydrogen produced by the reformer unit;
an oxidation device configured to convert carbon monoxide into carbon dioxide and disposed between the reformer unit and the fuel-cell unit;
a water-injection device disposed at the oxidation device and configured to inject water into the oxidation device ~~to supply oxygen to the oxidation device to convert carbon monoxide into carbon dioxide;~~
an expander disposed in an exhaust-gas stream of a cathode of the fuel-cell unit; and
a compressor disposed in a supply-air stream of the fuel-cell unit;
wherein the expander and the compressor are arranged on a common shaft;
wherein the oxidation device is configured to convert carbon monoxide into carbon dioxide by a reaction of carbon monoxide with oxygen supplied by the water injected by the water-injection device; and
wherein, based on the oxygen supplied by the water injected by the water-injection device, a reduced amount of a supplemental oxygen containing substance is supplied to the oxidation device.

29. (Previously Presented) The fuel-cell unit according to claim 28, wherein the compressor includes a two-stage compressor.

30. (Previously Presented) The fuel-cell unit according to claim 17, wherein the raw material includes a hydrogen-containing substance.

31. (Previously Presented) The fuel-cell unit according to claim 30, wherein the hydrogen-containing substance includes at least one of methanol and gasoline.

32. (Currently Amended) A method for generating electrical energy using a fuel-cell system, comprising the steps of:

producing hydrogen from a raw material in a reforming process, a fuel-cell unit of the fuel-cell system being operable in accordance with the produced hydrogen;

oxidizing carbon monoxide into carbon dioxide after the reforming process and upstream of the fuel-cell unit; ~~and~~

injecting water during the oxidizing step to supply oxygen to oxidize carbon monoxide into carbon dioxide; and

based on the oxygen supplied by the injected water, supplying a reduced amount of a supplemental oxygen containing substance for the oxidizing step.

33. (Currently Amended) A method for generating electrical energy using a fuel-cell system, comprising the steps of:

producing hydrogen from a raw material in a reforming process, a fuel-cell unit of the fuel-cell system being operable in accordance with the produced hydrogen;

oxidizing carbon monoxide into carbon dioxide after the reforming process and upstream of the fuel-cell unit; ~~and~~

injecting water during the oxidizing step to supply oxygen to oxidize carbon monoxide into carbon dioxide; and

based on the oxygen supplied by the injected water, supplying a reduced amount of a supplemental oxygen containing substance for the oxidizing step;

wherein the fuel-cell system includes a drive system of a motor vehicle.

34. (Previously Presented) The method according to claim 32, wherein the water is injected as one of a vapor and an aerosol.

35. (Previously Presented) The method according to claim 32, further comprising the step of supplying compressed air to at least one of a process gas

between a carbon monoxide oxidizing unit and the fuel-cell unit and a cathode of the fuel-cell unit.

36. (Previously Presented) The method according to claim 32, further comprising the steps of:

separating water from at least one of a cathode-exhaust stream of the fuel-cell unit and an anode-exhaust stream of the fuel-cell unit; and
supplying the separated water to the reforming process.

37. (Previously Presented) The method according to claim 32, further comprising the steps of:

burning an exhaust gas from an anode of the fuel-cell unit; and
supplying waste heat generated by the burning step to the reforming process.

38. (Currently Amended) A method for generating electrical energy using a fuel-cell system, comprising the steps of:

producing hydrogen from a raw material in a reforming process, a fuel-cell unit of the fuel-cell system being operable in accordance with the produced hydrogen;

oxidizing carbon monoxide into carbon dioxide after the reforming process and upstream of the fuel-cell unit;

injecting water during the oxidizing step to supply oxygen to oxidize carbon monoxide into carbon dioxide;

based on the oxygen supplied by the injected water, supplying a reduced amount of a supplemental oxygen containing substance for the oxidizing step;

burning the raw material; and

supplying heat energy generated by the raw material burning step to the reforming process.

39. (Previously Presented) The method according to claim 32, wherein the raw material includes a hydrogen-containing substance.

40. (Previously Presented) The method according to claim 39, wherein the hydrogen-containing substance includes at least one of methanol and gasoline.

Claims 41 and 42. (Canceled).